

What is claimed is:

1. A method of manufacturing an electrode for alkaline storage battery, said method including a process of manufacturing a porous substrate, said process comprising:

5 making a urethane sponge by foaming urethane resin composition;

 plating said urethane sponge with nickel; and

 firing said urethane sponge to remove urethane resin;

 wherein said process includes reduction of a void rate of said
10 urethane sponge.

2. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 1, wherein said reduction of the void rate is achieved by said step of coating said urethane sponge with
15 polyethylene terephthalate.

3. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 1, wherein said reduction of the void rate is achieved by said step of coating, said polyethylene terephthalate
20 being coated on urethane resin matrix such that said polyethylene terephthalate accounts for 50 to 100 % of a sectional area of said urethane sponge perpendicular to a thickness direction of said urethane sponge.

4. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 2, wherein said porous metal plate is made to 0.2 to 0.8 mm thick.

5 5. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 2 further comprising a step of impregnating an active material in said porous metal plate and drying after said process of manufacturing the porous metal plate, said active material mainly consisting of nickel hydroxide.

10 6. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 1, wherein said reduction of the void rate is achieved by a step of mixing at least one type of organic substance of glycerin, polyethersulfone, and organopolysiloxane to the urethane
15 resin composition before foaming.

 7. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 6, wherein said reduction of the void rate is achieved by the step of mixing said organic substance to urethane
20 resin at a volume ratio of 1/10 to 3/10.

 8. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 6, wherein a thickness of said porous metal plate is between 0.2 and 0.8 mm.

9. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 6, said method further comprising a step of impregnating an active material in said porous metal plate and drying after said process of manufacturing the porous metal plate, said
5 active material mainly consisting of nickel hydroxide.

10. A method of manufacturing an electrode for alkaline storage battery, said method including a process of manufacturing a porous metal plate, said process comprising:
10 making a urethane sponge by foaming urethane resin composition;
peeling said urethane sponge;
plating said urethane sponge with nickel; and
firing said urethane sponge to remove urethane resin;
15 wherein said process includes thinning of said urethane sponge.

11. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 10, wherein said thinning is achieved
20 by a step of grinding said urethane sponge.

12. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 11, wherein a thickness of said urethane sponge is made to 1.4 to 2.0 mm in said step of peeling.

13. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 11, wherein a thickness of said urethane sponge is made to 0.5 mm to 1.0 mm in said step of grinding.

5 14. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 11, wherein a thickness of said porous metal plate is made to 0.2 mm to 0.8 mm.

10 15. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 11 further comprising a step of impregnating an active material in said porous metal plate and drying after said process of manufacturing the porous metal plate, said active material mainly consisting of nickel hydroxide.

15 16. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 10, wherein said thinning is achieved by a step of rolling the urethane sponge using a roll press, and at least one of top and bottom rollers is heated.

20 17. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 16, wherein a thickness of said urethane sponge is made to 1.4 to 2.0 mm in said step of peeling.

18. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 16, wherein a thickness of said urethane sponge is rolled to 0.5 to 1.0 mm in said step of rolling.

5 19. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 16, wherein a thickness of said porous metal plate is made to 0.2 to 0.8 mm.

20. The method of manufacturing an electrode for alkaline
10 storage battery as defined in Claim 16, wherein at least one of the top and bottom rollers is heated to 200 to 400 °C.

21. The method of manufacturing an electrode for alkaline storage battery as defined in Claim 16 further comprising a step of
15 impregnating an active material in said porous metal plate and drying after said process of manufacturing the porous metal plate, said active material mainly consisting of nickel hydroxide.